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Periphery of the Maya Site of Nakum, Petén, Guatemala: Results of Research Carried Out Between 2001 and 2003

Nakum: Investigation history and site description

The site of Nakum is located in the department of Petén in northern Guatemala, 11 km north of Lake Yaxhá, at an elevation of c.a. 200 m above sea level. It was discovered in 1905 by a French count, Maurice de Perigny, who published the first plan of Nakum (Perigny 1908). He returned to the site during his next expedition in 1909-1910 (Perigny 1910; 1911). Further reconnaissance was carried out at the site by various researchers including Alfred Tozzer and Raymond E. Merwin (Tozzer 1913), Sylvanus Morley (1938: II: 7-21; V: part 1, plates 13, 86; part 2, plate 194) and Nicholas Hellmuth (1975; 1992). In 1989, the Instituto de Antropología e Historia of Guatemala (IDAEH) initiated efforts to rescue and protect buildings in the core area as part of the Tikál National Project. Formal investigations were initiated in 1994 with excavations and restoration of the most deteriorated monumental structures located in the central and southern sectors of the site. Another line of research focused on the complete documentation and contextual analysis of the Pre-Columbian graffiti identified in the exposed architectural remains at the core of the site (Hermes, Olko, Źrałka 2001; 2002). In 2002, a new map of the central part of Nakum was published by Quintana and Wurster (2002). The authors changed the existing names of most of the architectural complexes. Between 2001 and 2003, we carried out investigations on the periphery of Nakum, the results of which are presented in this article.

The core of Nakum is divided into three sectors (North, South and Central) (Fig. 1). The northern sector is formed by a spacious North Plaza delimited from all sides by low platforms originally supporting perishable constructions and a temple structure (Structure X). The northern part of the plaza houses the North Group, a four-building complex. The East Group is a massive platform topped by 14 possible residential buildings occupying the southeastern corner of the North Plaza. The northern and central sectors of the site are connected by an elevated causeway, Calzada Perigny, about 250 m long and 30 m wide. A small ballcourt (Structures 7 and 8) is located at the southern end of the causeway. The central sector of the site is arranged around the Central and East Plazas. The Central Plaza is delimited by the platform of the Acropolis and by Structure D (a 122 m long palace) from the south, Structure C to the west, Structure B (temple) to the north, and by Structure A to the east. Structure A is a high pyramid platform with two upper central rooms topped by a decorative crest-like roof and four lateral structures (nos. 1-4) adjacent to the north and south. Structure C is a pyramid platform topped by a temple, in front of which stands Stela C bearing an inscription that includes the only example of a Nakum emblem glyph. Thirteen stelae (two inscribed) along with 10 altars are located in the area of the Central Plaza. In the area to the east of Structure A is the East Plaza with its principal building, Structure V. The southern sector encompasses the Southeast Plaza and the Acropolis with 12 courtyards. The Southeast Plaza is surrounded by buildings from all sides: to the east by a huge pyramid

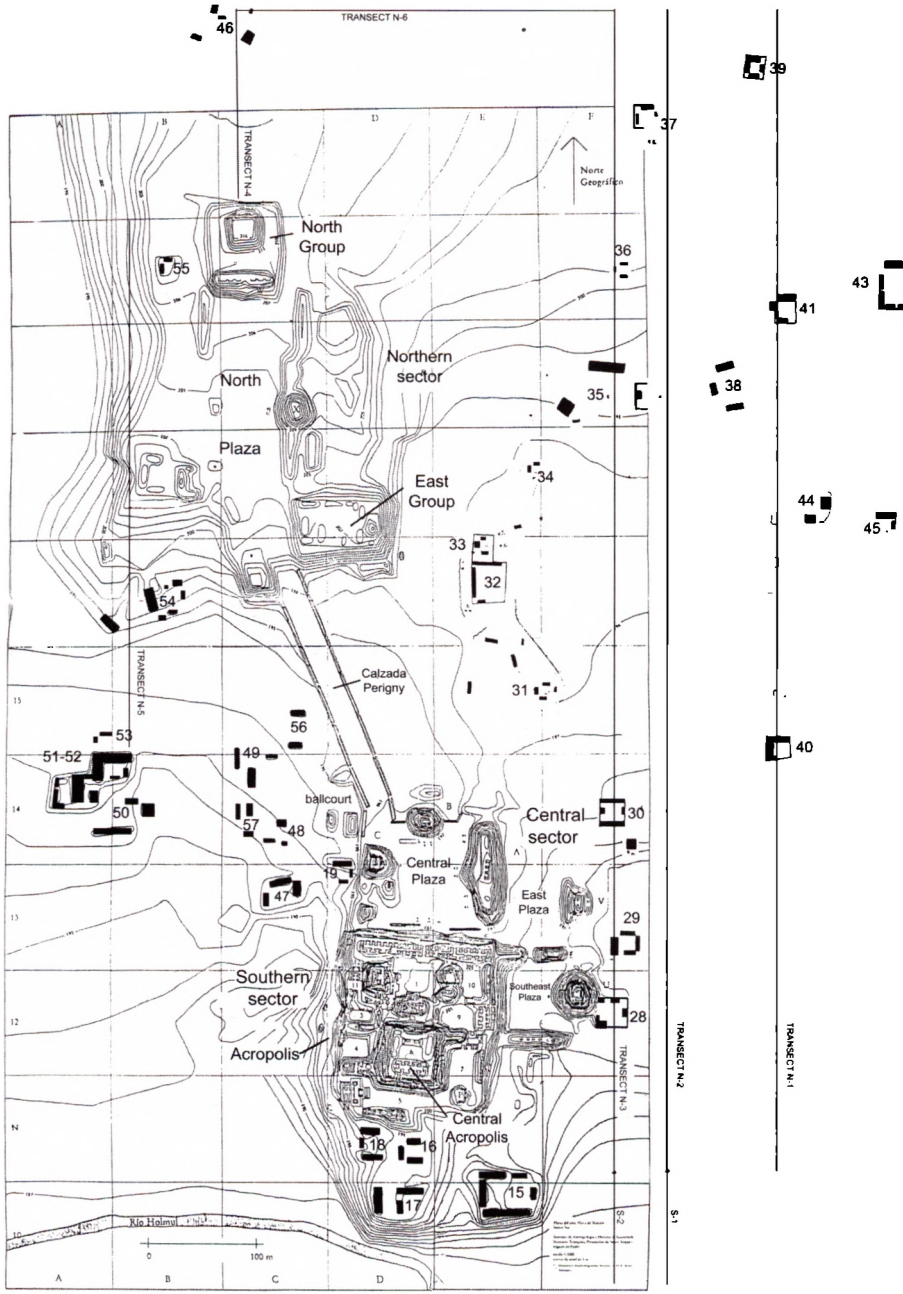


Fig. 1. Map of Nakum including all patio groups on the peripheries (marked in black) and transects, after Quintana and Wurster 2002 with corrections made by the authors, Proyecto Triángulo, IDAEH.

(Structure U), to the north by two large structures (no. 34, 35), and to the south by a long building (Structure 33) with two smaller residential groups behind it (Patio Groups 13 and 14). The western side of the Southeast Plaza is delimited by the Acropolis, which consists of a large architectural platform topped by palace-like structures grouped around 12 courtyards or patio groups. Each interior courtyard of the Acropolis (and consequently, the surrounding structures) is unique in proportion and size. This architectural compound is highly compact and has restricted access. The highest point and the heart of the Acropolis is a Central Acropolis consisting of a massive platform topped by five structures. This complex was probably the seat of the royal lineage of Nakum during the Terminal Classic period. An artificial reservoir located west of the Acropolis would fill with water during the rainy period.

These architectural compounds and buildings form a somewhat compact monumental core area. All structures and architectural groups located outside this central part are referred to in this article as peripheral, as can be seen in Fig. 1.

From the Middle Preclassic to the Early Postclassic: An outline of the construction history of the core of Nakum

Investigations realized in the site core indicate that the first evidence of construction activity dates to the end of the Middle Preclassic period (500/450-300 B.C.). This period saw the construction of the first versions of the East Group, Acropolis and Central Acropolis. In the following Late Preclassic period, all the above mentioned complexes underwent significant remodelling. Several new structures were also built.

In the first part of the Early Classic period, the first version of Structure E, along with a new version of Structure D, were constructed. In the second part of the Early Classic, four platforms in the *talud-tablero* style were built around Patio 1 (Structures E Sub-2, D Sub-6, 14/15 Sub-1 and G Sub-2). These platforms were joined at their internal corners, completely enclosing the area of Patio 1 (see: Koszkul *et al.* in this volume).

Nakum developed significantly during the Late Classic period (A.D. 550/600-800/850) when many new structures were constructed (Structures A, B?, F, I, N/60/61, R, U and ballcourt) and all existing buildings and complexes were rebuilt (Structures D, E, Central Acropolis). However, one of the most fascinating and intriguing facts about the history of Nakum, is that its greatest development occurred during the Terminal Classic – a period dominated by the fall of many Maya sites located in the Southern Lowlands. Archaeological investigations undertaken during the past several years in the Central and Southern sectors convincingly demonstrate that all the structures erected in the previous period were rebuilt during the Terminal Classic (Structures A, D, E, F, I, N/60/61, R, 14/15). A new version of the platform of the Acropolis with three stairways at its northern façade was constructed. Twelve patio groups located on the top of this complex achieved their final form and extent due to the construction of many new buildings. The new Terminal Classic structures in the Acropolis and other parts of the site include Buildings 24, 26 (sweatbath), 27, 52, 53, 62, 63, 63-A, 64, 65, C, G, H, L, O, Q, S, Y and Z.

The prosperity of Nakum faded by ca. A.D. 950. Archaeological vestiges of the following Early Postclassic period are very scarce. Material from this period is limited to sherds, a few offerings and burials found mainly in the Acropolis (Hermes *et al.* 2002).

Periphery of Nakum: History and methodology of investigations

It should be mentioned that some of the architectural complexes (called patio groups) that are considered peripheral were discovered and mapped before 2001. Tozzer's map which was published in 1913, included among others, structures located on the periphery that were part of some of the patio groups that were singled out by us, i.e., patio nos. 16, 17, 18 (structures 18 – 23 subsumed by Tozzer into Group XIV), patios 28, 29 (structures 36-44 subsumed by Tozzer into Group XII) and patio 30 (structures 47-48 subsumed by Tozzer into Group XIV). The structures mentioned above can also be found on Hellmuth's map, first published in 1975 and later in 1992 (Hellmuth 1975, 1992). Hellmuth made slight corrections to the map of Nakum by marking some new structures or verifying the location of buildings discovered earlier. During investigations carried out by Vilma Fialko (as part of the *Arqueología Regional* program) in the intersite area between Nakum and Tikal, a large architectural complex composed of patio nos. 50-53 (named Nakum 1 by Fialko) was mapped. Additionally, several test pits were excavated in this group (Fialko 1996).

To summarize, the entire peripheral area of Nakum includes the following patio groups: 15-19, 28-58 (Fig. 1). In the case of patio group nos. 28-30, we followed the numbering of the structures identified by previous archaeologists, correcting their location and mapping structures overlooked during previous surveys. Patio nos. 31-49 and 54-58 were first discovered and mapped from 2001 to 2003. The initial results of the reaserch carried out in the peripheral region in 2001 was published by Justyna Olko (2002).

An archaeological survey was conducted to the north, south, east and west of the central part of the city. The archaeological camp and *lago* are located to the west of the southern sector. Therefore, only the area to the west of the central and northern sectors and Perginy Causeway were investigated. In the eastern part, 3 transects were marked out (N-1, N-2 and N-3), each of them 1100 m long (orientation N-S). Their outlines were based on a triangulation point (E-30) that was defined by topographers. Transect nos. N-3 and N-2 were 50 m distant from one another while transect N-1 was located 100 m to the east of transect N-2 (Fig. 1). Transect N-4 was marked to the north of the North Group; it was oriented on a N-S axis and was 250 m long. A 500 m long transect (N-5) was marked to the west of the Perigny Causeway and the northern sector. The last of the transects (no. 6) bound together transects 3 and 4: it was 381 m long and was oriented on an E-W axis. Since we wanted to investigate the region to the south of the southern sector in the direction of the Holmul River, we also outlined two other transects (S-1 and S-2) as a prolongation of transects N-2 and N-3. Our next step was to investigate the area along and between the outlined transects. In the case of transects N-4 and N-5, the terrain was surveyed to the east and west of them, up to a distance of 100 m. In order to explore the largest surface area possible, a strip of land situated 100 m to the east of the most eastward transect (N-1) was also investigated. All the patio groups and structures that were discovered were subsequently mapped with the use of a leveller and a compass of the Branton type. Subsequently, we opened a test-pit within the boundaries of each of the patio groups. In order to obtain dating material, archaeologists excavating the intersite area or the periphery of the Maya centres in the previous decades usually adopted a patio group rather than a single structure as the unit in which a test-pit was opened. During the investigations of the Tikal Project, every transect that was marked out from the central part of the site in each of the cardinal directions was further divided into 3 parts, depending on its distance from the centre of Tikal. The next step was to choose randomly about 1/3 of the registered patio groups for test-pitting. Test-pits the

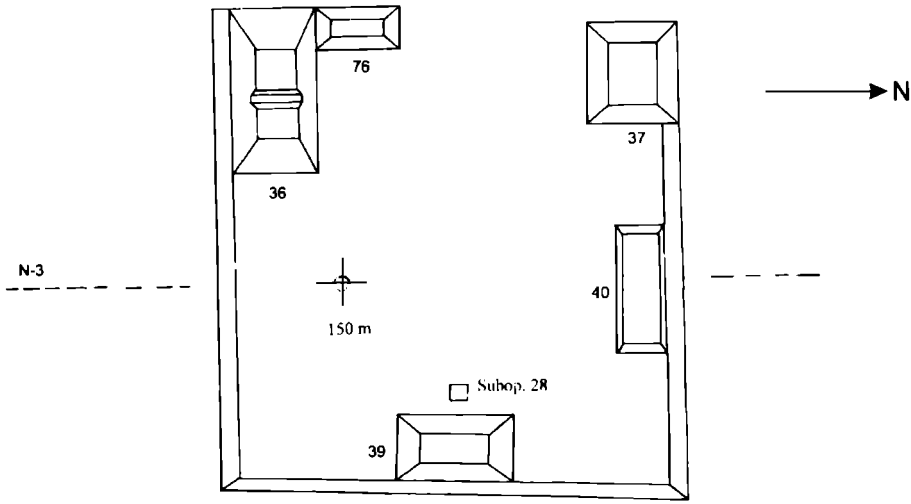
size of 1m^2 were localised off the backs and sides of structures. In doing so, they missed evidence of construction dating and reconstruction of individual mounds, but had a greater possibility of sampling stratified middens and dating the last major occupation (Fry 1969, 58).

In the case of research carried out by the Yaxha-Sacnab Historical Ecology Project, a slightly different method of test-pit localising was used (Culbert and Rice 1990; Rice and Rice 1980, 1990). The basic unit used was not a patio group, but an individual structure. 25% of all the platform structures were subject to investigations within the boundaries of each of the transects that were marked out around the Yaxha and Sacnab Lakes. Test-pits were not opened in the vicinity, but inside the structures and penetrated the fill of the building. A similar method was employed somewhat earlier during investigations run by the Belize River Valley Project and at the Altar de Sacrificios site (Willey *et al.* 1965). In case of the Yaxha-Sacnab Historical Ecology Project, the Rices decided on this method, pointing to the possibility that the midden material from a patio group had been removed and reused as construction material in particular structures. Therefore the midden material of a particular group may have been completely destroyed, disrupting the archaeological context and compromising layers that represented the early occupational phases (Rice and Rice 1980, 438). Both sampling methods mentioned above have some flaws. The majority of these inaccuracies may be avoided only in the case of broad-surface excavations, which are practically impossible to carry out on such a large terrain.

As in Tikal, a patio-type group was adopted as the basic dating unit in Nakum. All 36 peripheral patio groups were subjected to investigation. In the case of group nos. 15–17, test-pits had already been opened in 1999 as part of the test-pitting program carried out in the southern part of the site (Hermes and Calderón 1999). The remaining complexes were test-pitted in 2001 and 2003. The test-pits were square in shape, with each side 1 m long, and were usually localised in front of the largest structure of a particular group (Figs. 6-8). Archaeological investigations were based on the stratigraphic method and it was therefore possible to distinguish up to several archaeological layers. There was also an attempt to obtain additional dating material from looters' trenches that were dug into the facades of some structures.

The main aim of the test-pitting research was to obtain information on the occupation phases in all of the peripheral patio groups with a particular emphasis placed on the final phase. The periphery of Nakum is made up of 36 patio groups with 142 structures. Since the periphery occupies an area of 0.71 km^2, we estimate that there were about 200 structures/km^2 there.

Almost all of the registered structures are in the form of mounds measuring from a dozen centimetres to a few meters in height. They are usually grouped around a plaza situated on a small artificial architectural platform (Figs. 2 and 3). Single, solitary structures that did not make up a patio complex or form such a complex with so-called invisible structures (structures that are not visible during archaeological survey and may only be discovered during excavations – see: Johnston *et al.* 1992) were only registered in a couple of cases. The distances between particular patio groups, are usually from 30 to 300 m with the exception of a few complexes situated close to one another. These distances correspond with data from other Maya sites as well as with ethno-historical information and contemporary ethnographic analogies, all of which indicate the existence of household gardens and orchards between individual residential groups (Olko 2002). All the patio groups registered on the periphery of Nakum are situated on elevated terrain. This pattern is characteristic for the occupation



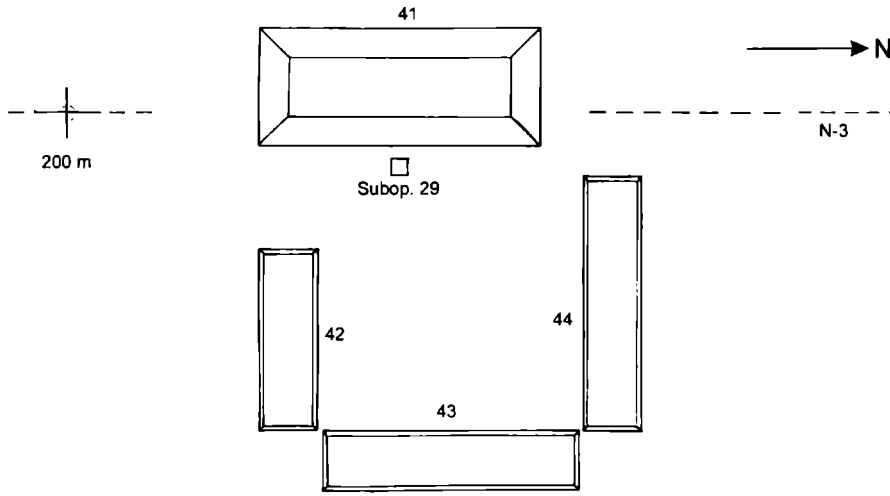
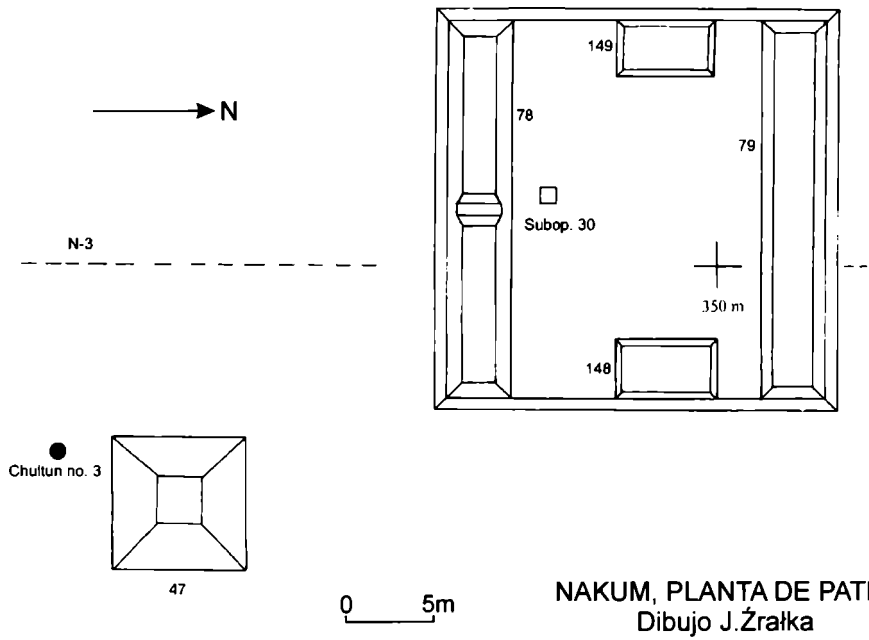


Fig. 2. Nakum, plans of Patio 28 and Patio 29, drawing by J. Olko and J. Źrałka, Proyecto Triángulo, IDAEH.



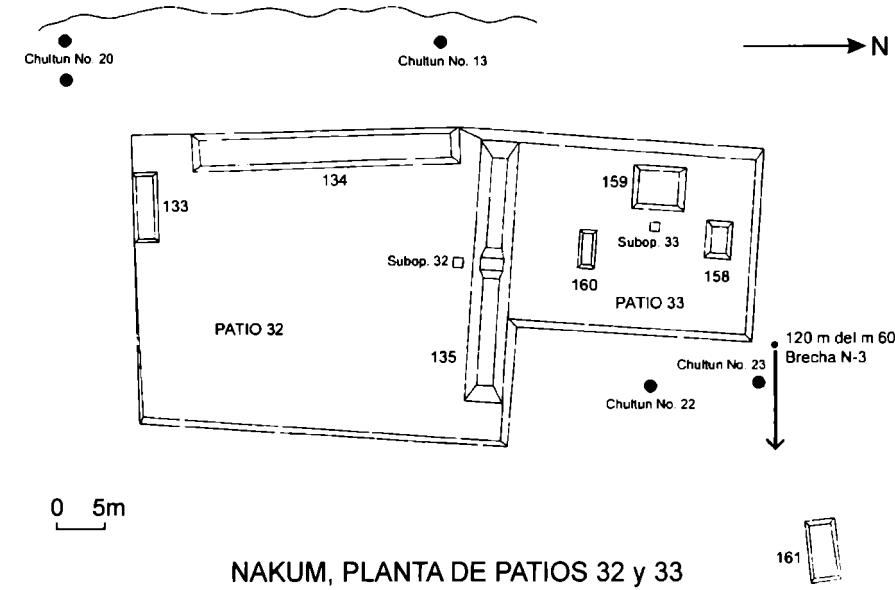


Fig. 3. Nakum, plans of Patios 30, 32 and 33, drawing by J. Olko and J. Źrałka, Proyecto Triángulo, IDAEH.

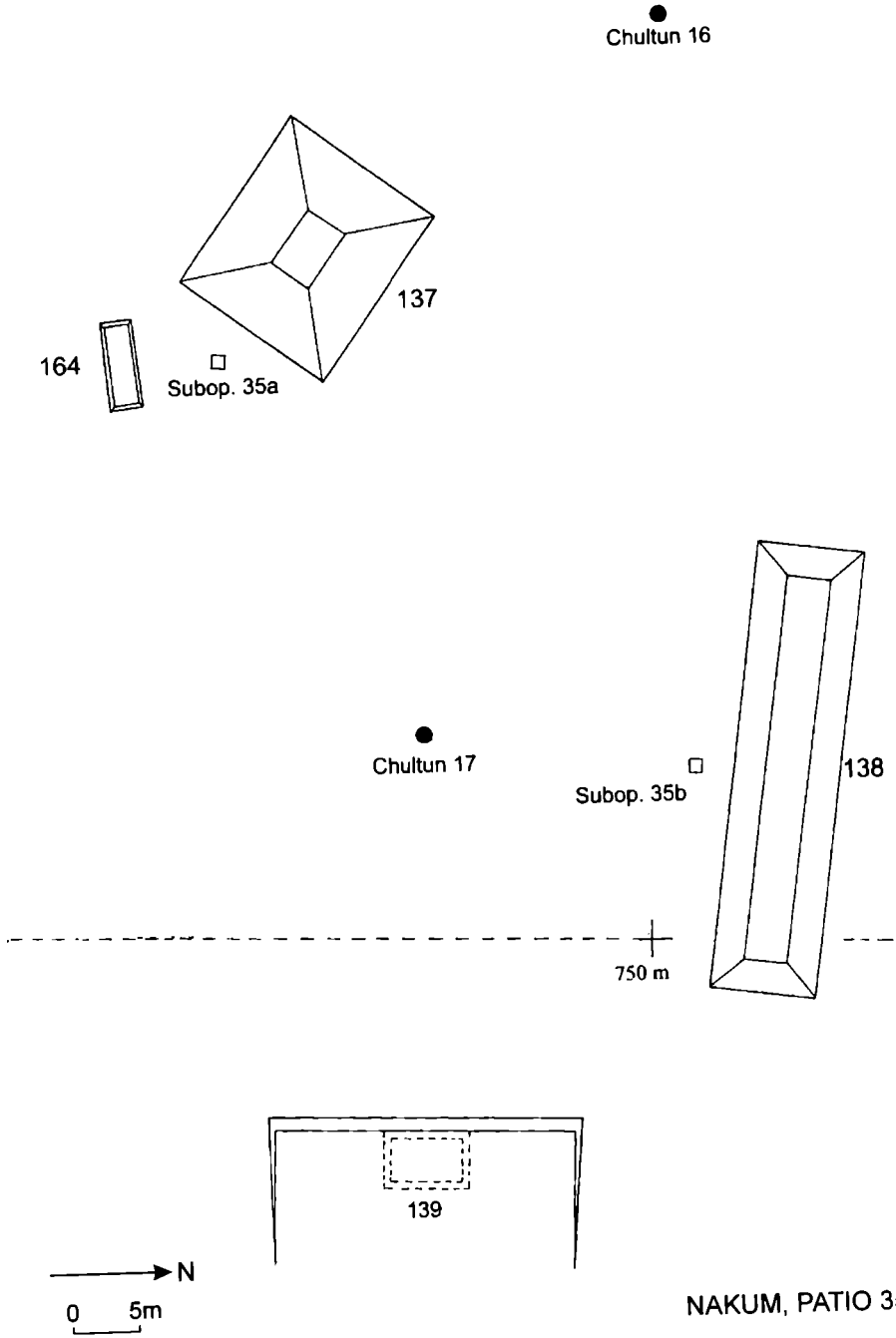
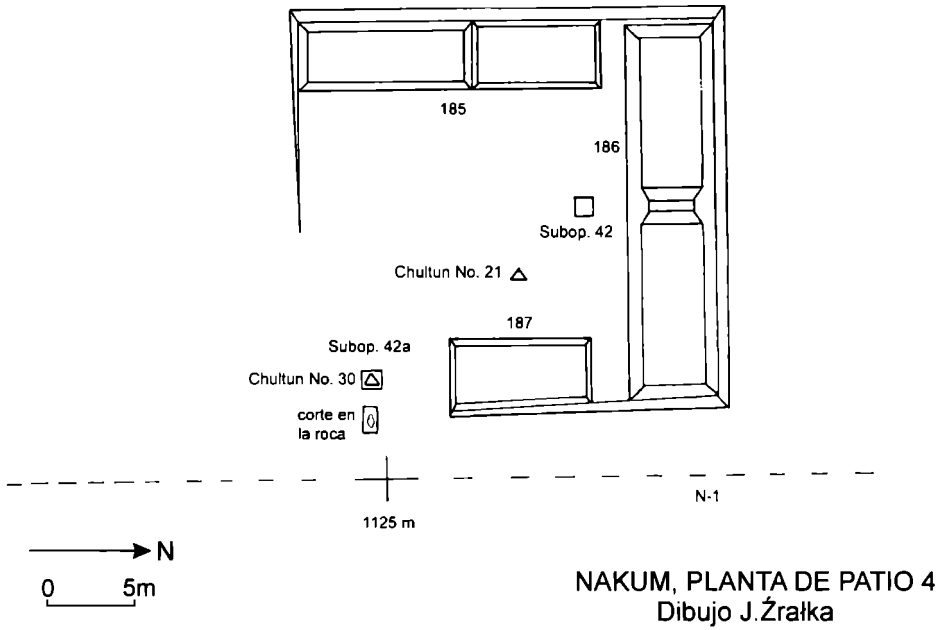


Fig. 4. Nakum, plan of Patio 35, drawing by J. Źrałka, Proyecto Triángulo, IDAEH.



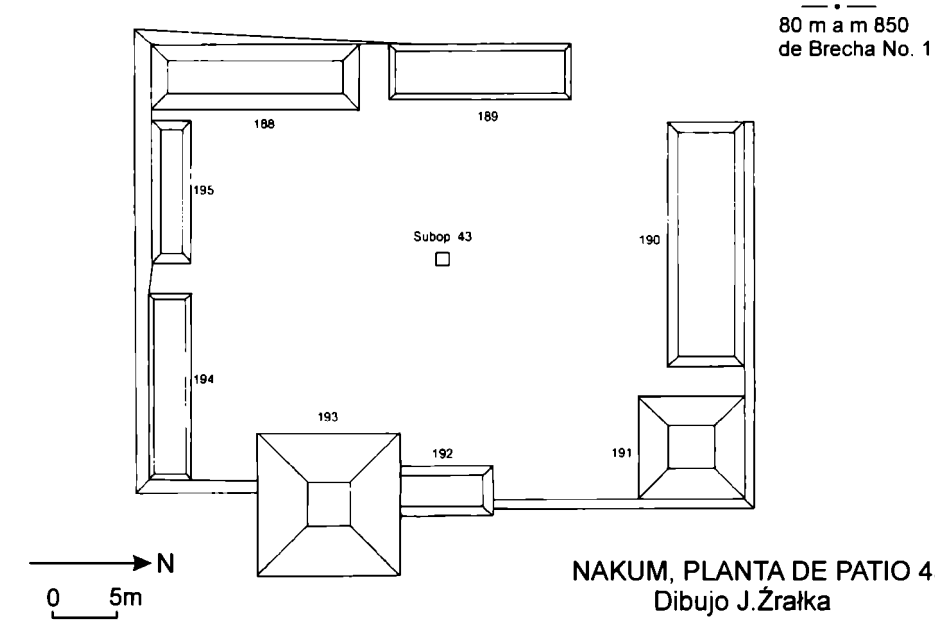


Fig. 5. Nakum, plans of Patio 42 and Patio 43, drawing by J. Źrałka, Proyecto Triángulo, IDAEH.

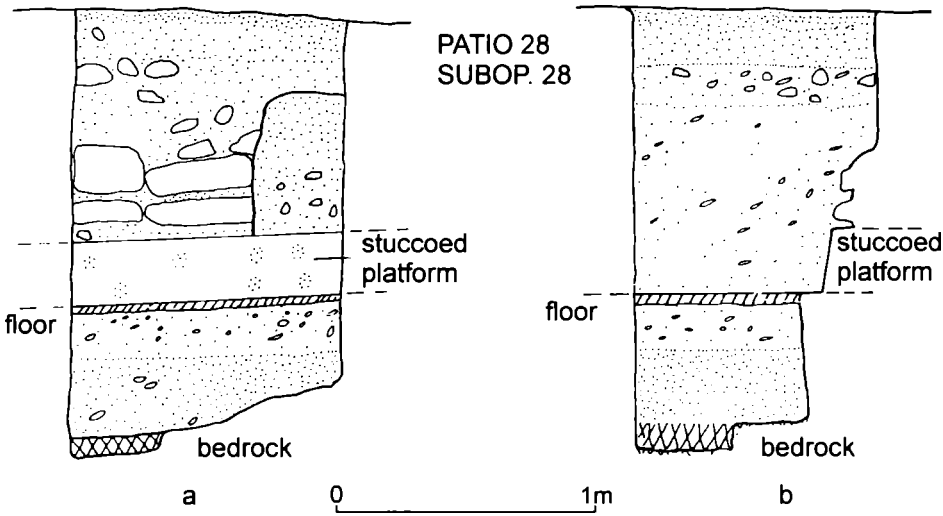


Fig. 6. Nakum, profiles of test pit excavated in Patio 28 with vestigies of Preclassic architecture: a) western profile, b) southern profile. Proyecto Triángulo, IDAEH.

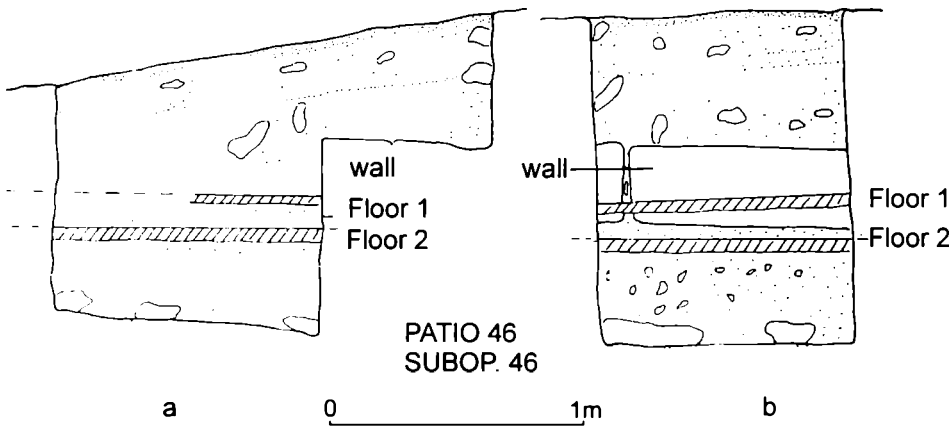


Fig. 7. Nakum, profiles of test pit excavated in Patio 46: a) northern profile, b) western profile. Proyecto Triángulo, IDAEH.

of the periphery of other Maya sites such as Tikal (Puleston 1983). Occupation was obviously concentrated on the elevated parts of the terrain since the lower areas were flooded due to heavy rains in the rain season, with swamps and half-swamps springing up in many places. Therefore, the *bajo* region spreading to the east and south-east of the East and South-east Plazas and patio group nos. 28-30 as well as the Perigny Causeway, were unoccupied. The low terrain stretching to the east of the North Group also lacks vestiges of occupation.

Many patio groups were built on small earth or stone-earth platforms, which currently measure from a dozen centimetres to approximately 3 metres in height. In a number of cases artificial platforms were of variable heights within one patio group. This was a result of

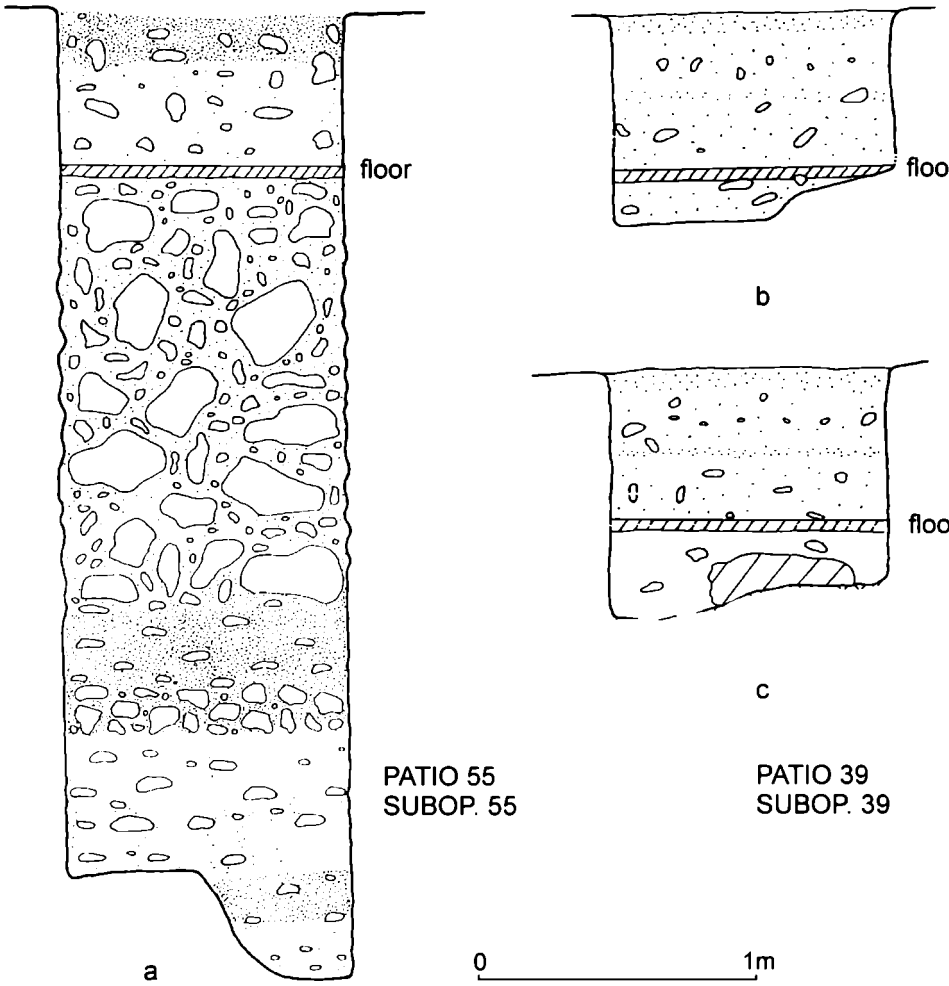


Fig. 8. Nakum, profiles of test pits excavated in Patios 55 and 39: a) eastern profile of Patio 55, b) northern profile of Patio 39, c) western profile of Patio 39. Proyecto Triángulo, IDAEH.

attempts to vary the height of the platforms to compensate for uneven ground levels in order to create a level surface. Artificial platforms on which buildings were constructed could also prevent these structures from being flooded during the rainy season. Thus, in the case, of Patio 43, the platform was about 3 m high in the southern and eastern sections of the complex. In the north-western section it disappears, almost entirely aligning with the ground level (Fig. 5).

Some of the patios visibly stand out against the other groups because of their size and complexity. Among them are patio nos. 15, 35, 38 and 43 as well as an architectural complex that is made up of patios 51-52. Except for two large patio groups (35 and 38) these complexes were constructed on architectural platforms elevated above the surrounding grounds. Most of the structures that form such complexes are of considerable size and most

of them probably are the remains of vaulted stone buildings or structures with walls constructed entirely of stone and roofs made of perishable materials. Access to the above mentioned complexes seems to have been more restricted than in the case of other patio groups. The sizes of these larger patio groups indicate that they were of an elite nature. They differ to a large extent from the small patio groups that consist of low platform-structures (Patio nos. 16, 17, 34, 36, 44, 45, 48, 49, 53, 56, 57) that may have been inhabited by people of a lower socioeconomic status than those residing in the large patio groups mentioned above.

In some of the patio groups, one structure stands out among other platform-structures (of a given complex) because of its size (among others: Patios 28-30, 32, 39, 58 – Figs. 2-5). In some cases, these dominant constructions in a group of buildings may have been the residence of a chief or the head of a family. In other cases the presence of high, square-shaped structures are most probably the remains of a building that served a sacred function (e.g. Patios 35, 43 and a pyramid located close to Patio 30 – Figs. 3-5, 14). Similar buildings are also known from other Maya sites and they are usually interpreted as family temples, where gods and ancestors were worshipped (Olko 2002). Some of the "temple type" buildings at Nakum are situated on the eastern side of a plaza (e.g. Patio 43 [Fig. 5]). In these cases they represent Plaza Plan 2, an architectural pattern that is well known from the peripheral groups of Tikal. In Plaza Plan 2 complexes, the dominant structure, which is situated on the eastern side of a plaza, is identified as a temple of the family that inhabited a given architectural group. Many excavated patio groups at Tikal had burials beneath the eastern structures and it is assumed that these interments may have belonged to the extended family founders and other important family/lineage members (see: Becker 1971, 1999; Jones 1999).

Periphery of Nakum: Dating

A vast test-pitting program, realized in the area of all the patio groups located on the periphery of Nakum, provided us with vital information on dating (Table 1). However, before we discuss this topic, it is necessary to stress that the data discussed below needs to be regarded with caution since it is impossible for one test-pit to render factual information regarding the function, dating and character of individual patio groups.

The oldest dated archaeological material from our investigation are ceramics from the Middle Preclassic period that were discovered in 6 groups (patio nos. 33, 39, 43?, 45?, 52, 55). Late Preclassic pottery was found in 26 peripheral complexes. Material dating to that period was identified in all layers of two complexes (patio nos. 46 and 48?). In other groups (patio nos. 19, 28, 33, 43, 44, 45, 50, 51, 52, 54, 55), Late Preclassic ceramics were discovered in lower layers that were covered by later layers, sometimes with floors that usually indicate an undisturbed stratigraphic context. The above mentioned patio groups may represent occupation vestige of the Late Preclassic period on the periphery. In other cases (e.g. patio nos. 15, 16, 47, 49) Preclassic material was registered in the upper layers, where it was mixed with pottery coming from the Classic period which may point to the fact that such early materials were reused and adapted for construction purposes. Construction material utilised as fill for structures or architectural platforms was very often transported from a long distance. This was revealed by broad surface and detailed excavation of structures located in the center of Nakum. The presence of Preclassic material in the construction fill does not necessarily point to Preclassic occupation in the group in which it was identified. Similar problems were also encountered at other Maya sites, for example, in Tayasal, where Postclassic buildings were constructed with the use of Preclassic material (Chase 1990, 152-

153). In the lowest layers of patio no. 28, architectural remains in the form of a stuccoed step or platform were discovered together with pottery dating to the Late Preclassic period (Olko 2002).

Occupation vestiges at the periphery of Nakum from the Early Classic period are extremely meagre. Early Classic pottery was discovered only in six patio groups (patio nos. 15, 30, 32, 33, 58) and it was usually mixed with later materials. Two groups (nos. 36, 40) yielded Late Classic pottery in every layer, indicating that they were constructed and used during that period. An additional 4 patio groups (nos. 29, 37, 39, 42) contained material from the Late Classic period in layers covered by a culture layer with material dating to the Terminal Classic period. This may indicate continuous occupation from the Late Classic to the Terminal Classic period in the above-mentioned complexes. In 28 patio groups (nos. 15-19, 28-33, 35, 38, 42-44, 46, 47, 49-58), Terminal Classic material was identified. In three other groups (nos. 37, 39 and 41), pottery from the uppermost cultural level may also date to that very period[1]. In 9 complexes (patio nos. 16-18, 31, 35, 38, 43, 49, 53), material dating to the Terminal Classic period was discovered in all cultural layers. It is highly probable that these complexes were constructed and were in use during that period. To sum up, Terminal Classic material was documented in 77.8 to 86.1% of all 36 investigated complexes on the periphery of Nakum. These numbers correspond with data obtained in the site core where intense construction activity occurred during the Terminal Classic period, as already discussed. The essential problem, however, is the fact that we are not able to ascertain if all the above mentioned occupations were contemporary with one another since the material obtained during archaeological excavations only allows us to date the pottery to the Terminal Classic period, which in the case of Nakum lasted c.a. 100/150 years (c.a. 800/850-950).

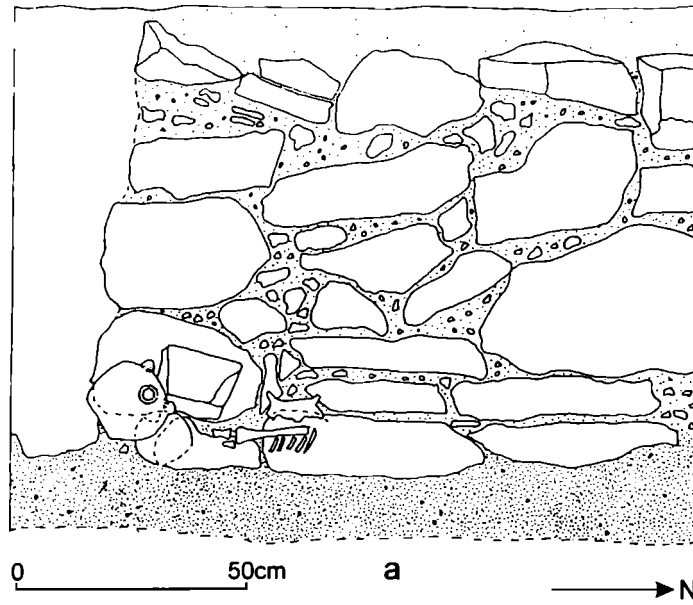
Table 1

Chronological period	Number of patio groups containing artefacts	Percentage
Terminal Classic	28-31	77.8-86.1 %
Late Classic	13-14	36.1-38.9 %
Early Classic	6	16.7 %
Late Preclassic	26	72.2 %
Middle Preclassic	6	16.7 %

Chultuns, quarries and burials

Investigations carried out at the periphery of Nakum brought about the discovery of numerous *chultuns*, burials and stone quarries. Among the 35 *chultuns* that were documented in Nakum, a great majority are situated on the periphery. So far, 22 chultuns have been excavated. Chultuns 10, 12 and 20 contained a great number of materials from the Late Preclassic and they can be dated to that period. Additionally, a Preclassic burial was deposited in a small pit dug at the bottom of Chultun 20. The deceased was furnished with one ceramic vessel (*tecomate*) of

[1] Pottery found in the first layer of Patios 37, 39 and 41 can be ascribed either to the Late or Terminal Classic period.



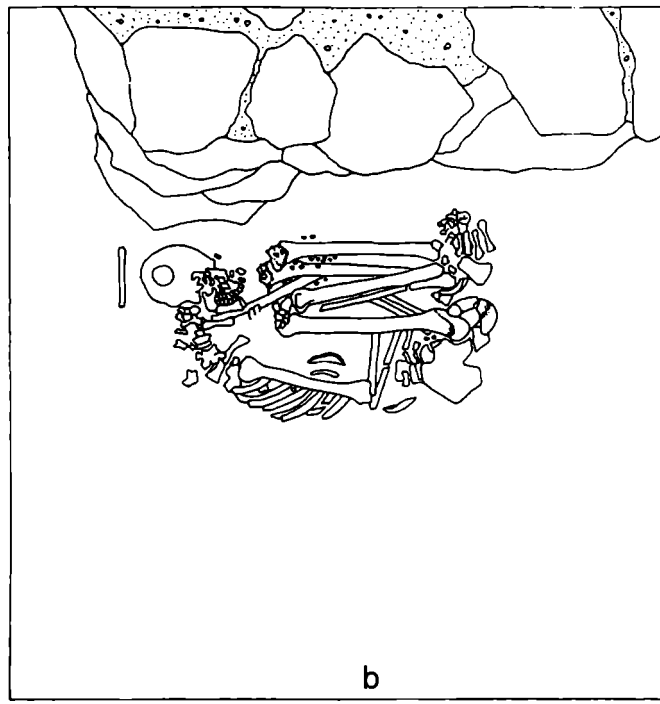
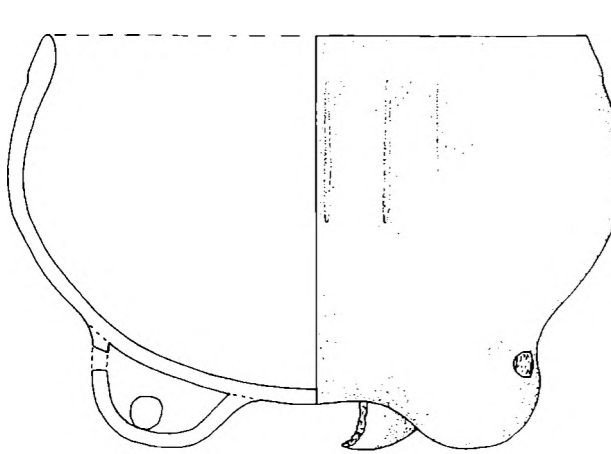


Fig. 9. Nakum, section (a) and plan (b) of Burial 5, drawing by J. Olko and J. Źrałka, Proyecto Triángulo, IDAEH.



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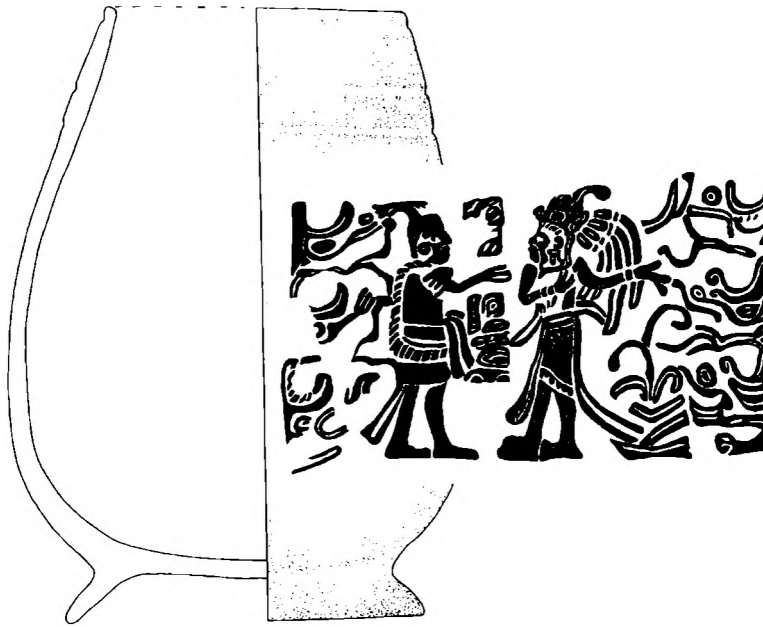

b

Fig. 10. Nakum, vessels from Burial 5, a) Azote Incised; b) Pabellon Modeled-carved. Proyecto Triángulo. IDAEH.

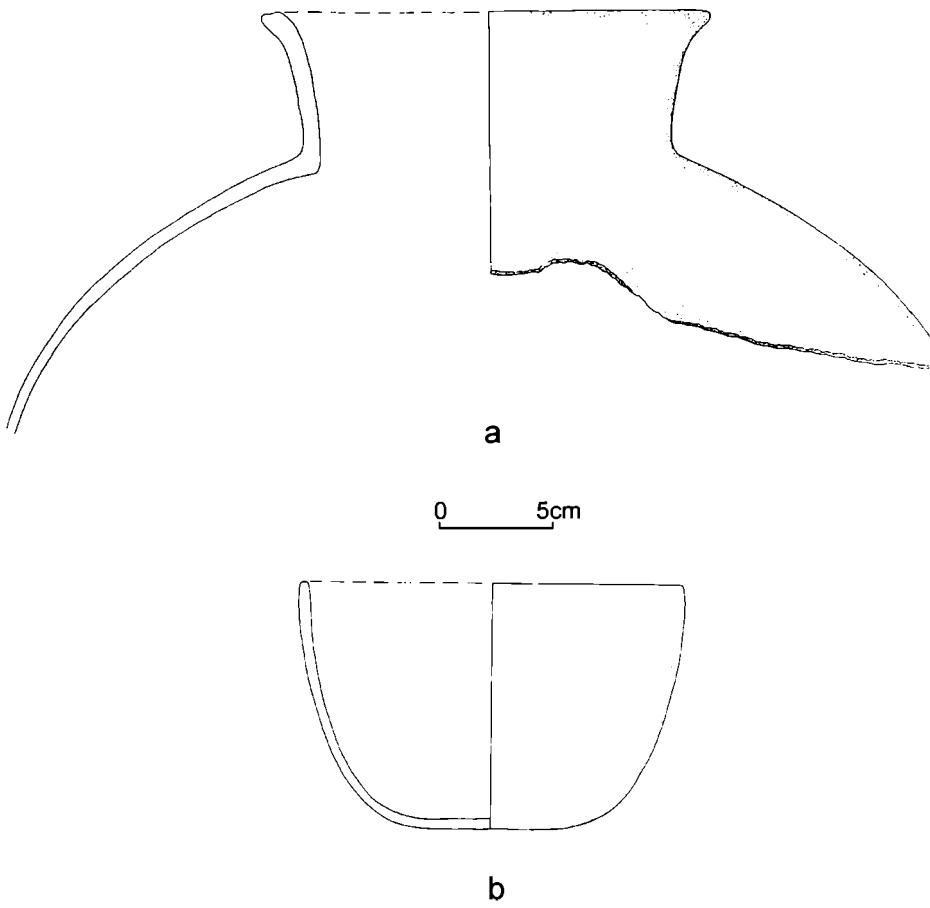

Fig. 11. Nakum, Offering 9: a) vessel NKMC 021, Azote Orange; b) vessel NKMC 022, Botifela Orange. Proyecto Triángulo, IDAEH.

probable Paila Unslipped type and one caracol. Another chultun (no. 31) located close to Patios 51-52 complex has 3 chambers and two mouths. It contained 3 burials (nos. 25, 27 and 28) of Late Preclassic and Protoclassic date, each consisting of a single human skull (Calderón 2003, 5-7). It should be also mentioned that several test pits opened in the courtyard of Patio 52 yielded large amounts of material from the Late Preclassic and Protoclassic periods related to the levelling of the patio courtyard and the construction of new floors. Moreover, in the southern part of the Patio 52 courtyard, a Late Preclassic offering was found (Offering 25). It was discovered at a depth of 2.25 m below the surface and consisted of two vessels (plate covering a bowl). One vessel contained a jade bead (Calderón 2003).

A significant number of Late Classic ceramics were discovered in Chultuns 7, 8 and 30. The last chultun is of special interest. It is located in Patio 42 along with another chultun (no. 21) (Fig. 5). When we discovered Chultun 30, it could be reached by means of a rectangular cut made in the bedrock. At first glance, this cut seemed to serve as an access to the chultun. When cleared, it appeared to be a cut made in the wall of one of the three chambers

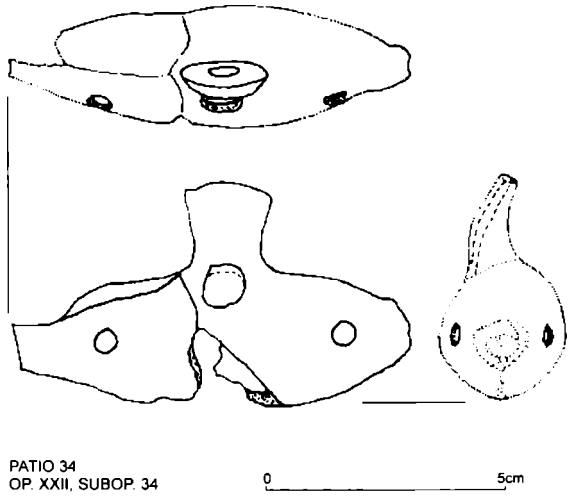

Fig. 12. Nakum, whistle found in test pit excavated in Patio 34, Late Classic period; drawing by J. Olko and J. Żrałka, Proyecto Triángulo, IDAEH.

of the chultun (Figs. 13, 15, 16). All of the material discovered in the chultun was from the Late Classic (Fig. 17). It turned out that the actual access to the chultun was covered with a round stone slab which was visible from the interior of the chultun. Excavations undertaken in the plaza of Patio 42 showed that in the place where we expected to discover the mouth of Chultun 30 and the stone slab, it covered, we found a small step or platform associated with Terminal Classic material. It is possible that during the Late Classic period some structures, including at least one chultun (no. 30), existed here. The complex was probably abandoned and later, during the Terminal Classic, occupied by a new group of people. They constructed a small platform of unknown function and probably some other structures in the area of Patio 42 as well. It is likely that while cutting stones from the bedrock for use in construction, they unwittingly came up against the chamber of the old chultun. This might explain the atypical cut in the wall of the chultun chamber.

In 13 *chultuns* (nos. 1?, 2, 4, 6, 9, 11, 13, 16, 19, 22-25), material from almost every layer is dated to the Terminal Classic. Most excavated chultuns that provided Terminal Classic materials have a bell-like section and a circular plan. It seems that this form was especially typical for Nakum during the Terminal Classic. We find this in the case of chultuns 1, 2, 6, 9, 11, 23, 24 and 25. In Chultun 4, a Terminal Classic burial was found; two other Chultuns (nos. 7 and 22) contained Terminal Classic offerings. Offering 9, found in Chultun 7, consisted of fragmented vessels of Azote Orange, Botifela Orange and Cambio Unslipped types (Fig. 11). Offering 12, discovered in Chultun 22, consisted of one vessel of the Cambio Unslipped type.

Several quarries from which construction stone was obtained were also discovered on the periphery of Nakum. The majority of them were situated between patio nos. 40 and 44 as well as in the vicinity of patio nos. 54 and 55. Some of the quarries have visible traces of stone cutting (Fig. 18). The quarries were localised in close proximity to the patio complexes, the inhabitants of which may have specialised in masonry and provided construction material for other peripheral complexes or the city center.

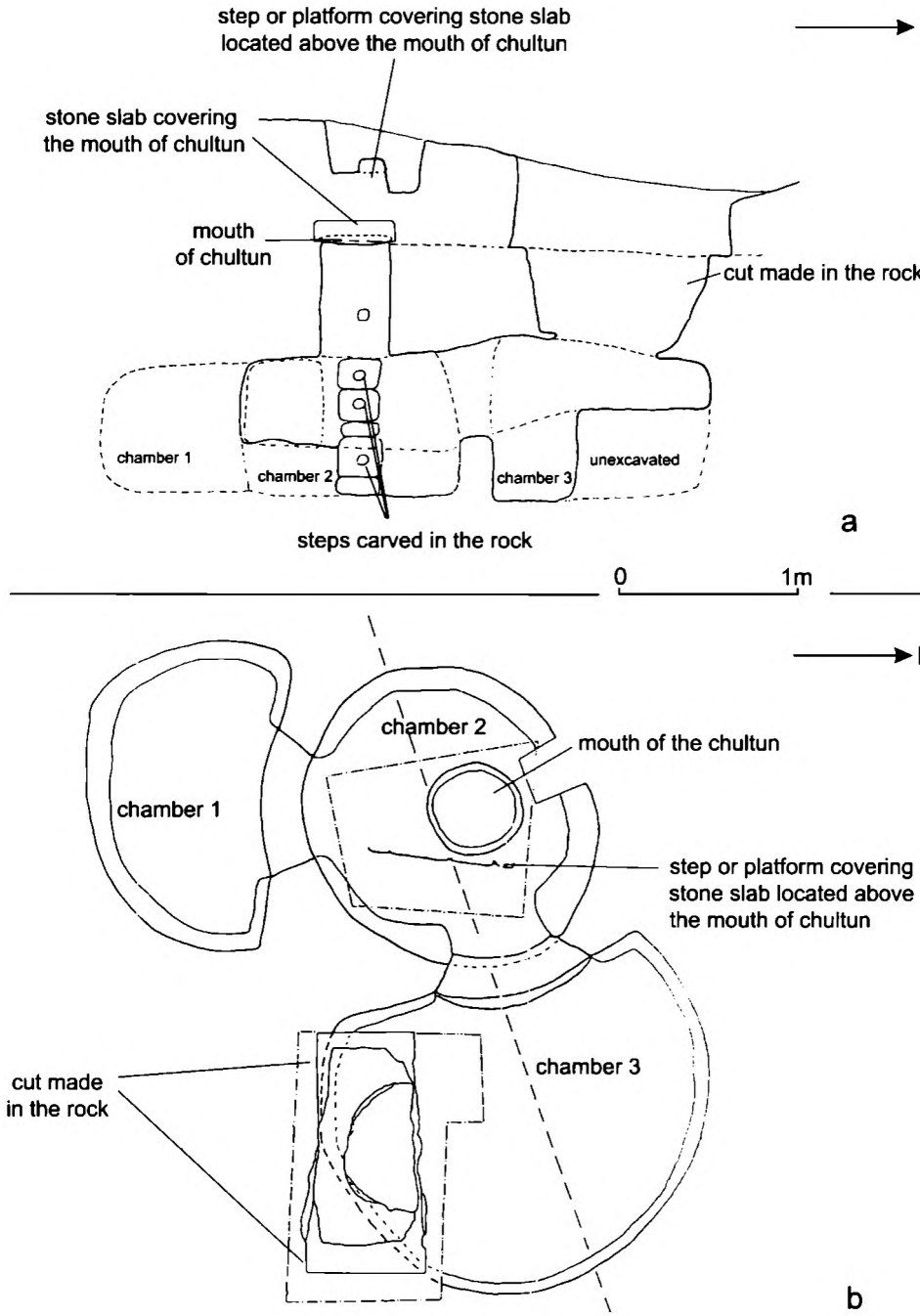

Fig. 13. Nakum: plan (b) and section (a) of Chultun 30, Patio 42; drawing by Rigoberto Choc, Proyecto Triángulo, IDAEH.

Fig. 14. Nakum. View of Structure 193 (pyramid structure) from Patio 43, photo by J. Żrałka.

Fig. 15. Nakum, Patio 42. Cut made in the wall of one of the chambers of Chultun 30, photo by J. Żralka.

Fig. 16. Interior of Chultun 30 before excavations, photo by J. Żrałka.

Fig. 17. Fragment of figurine found in Chultun 30, Late Classic period, photo by J. Żrałka.

Fig. 18. Nakum, quarry with signs of cutting. Area between Patios 40 and 44, photo by J. Żrałka.

Fig. 19. Nakum: a) plan of Burial 5; b) vessel of Pabellon Modeled-carved type found in Burial 5, photo by J. Żrałka.

During the test-pitting program carried out at the periphery of Nakum, three burials (beyond those burials excavated in the chultuns) were discovered; one (Burial 26) dating to the Late Preclassic and two others (Burials 5 and 24) to the Terminal Classic period. Burial 24 was localised under the floor of a courtyard of patio no. 52. It belonged to a small child and was not equipped with any offerings. Burial 26 was discovered in the lowest layer of one of the test pits opened in the courtyard of the same complex. The deceased was not furnished. Burial 5 was found in patio no. 16. The grave contained the corpse of a young man with traces of skull trepanation (Figs. 9, 19). The deceased was equipped with two vessels, a shell necklace, a worked bone and a few pieces of greenstone. One vessel (NKMC 014) belongs to the Azote Incised type; another (NKMC 015) represents the Fine Orange type and was decorated with a beautiful scene modelled in relief (the so called Pabellon Modeled-Carved type) (Figs. 10, 19). The content of the burial indicates that, at least during the Terminal Classic period, the people inhabiting the peripheries of Nakum had access to exotic trade products such as Fine Orange pottery and greenstone.

Summary and conclusions

Investigations performed on the periphery of Nakum indicate that the site occupies an area of c.a. 0.88 km^2, of which 0.17 km^2 is encompassed by the central part of the city and 0.71 km^2 by the periphery. Approximately 142 structures are localized on the periphery and the remaining 120 are situated in the site core. If we consider the structure density, we have 297.7 structures/km^2 for the entire city, including 705.8 structures/km^2 in the core area and 200 structures/km^2 in the periphery. In the majority of Maya lowland sites, the number of structures located in the site core usually varies between 128 and 233 structures/km^2 (Culbert and Rice 1990, 19). The figure for Nakum is much higher. Although this reflects a densely populated and built-up site core, it refers to a relatively small area of 0.17 km^2. The average density of structures in the periphery is similar to other Maya sites if we consider that these results apply to the entire investigated area, including the uninhabited *bajos*. For example, comparative figures at Tikal are 181 structures/km^2 (surface area of 7 km^2 in the peripheral region stretching around the city centre); Seibal: 144 structures/km^2 in the entire area and 244 structures/km^2 in habitable land (excluding *bajos*) (Rice and Culbert 1990, table 1.1).

Excavations carried out on the periphery of Nakum resulted in the discovery of a large amount of material from the Late Preclassic in many of the registered patio groups. Although some of this early material discovered in the platforms of individual complexes may have been reused as construction material by later inhabitants, at least several of these patio groups may have been constructed and inhabited during that period. Occupation clearly decreased during the Early Classic period, following the general pattern seen in the Triángulo Yaxha-Nakum-Naranjo National Park region and other areas of the Southern Maya Lowlands. Evidence from the periphery points to increased occupation in the Late Classic period; this is confirmed by investigations in the site core. Of note, there was a major increase in occupation at the periphery (amounting to between 39-50%) that took place between the Late Classic and the Terminal Classic periods. This indicates a large demographic growth or even a migration of people from the neighbouring regions to Nakum during the Terminal Classic. Investigations carried out in the peripheries and in the core of the city clearly point to the fact that the Terminal Classic was the period of the greatest cultural prosperity and demographic increase for Nakum.

The differences in the sizes of individual patio-type groups, especially those dating to the Terminal Classic period are particularly important, since they point to a likely increase

in socioeconomic diversification of the population inhabiting the periphery. At Nakum, we do not observe a tendency for the largest examples of stone and monumental architecture to be in the vicinity of the epicentre and decrease in size with increasing distance from the site core. Some of the large complexes such as Patio 43 are situated far from the center while other, modest groups, e.g. Patio 16, are located only a few meters from the Acropolis. The discovery of a burial equipped with an imported Fine Orange vessel and greenstone in the latter group points to the fact that at least during the Terminal Classic, the people inhabiting the Nakum periphery had access to exotic products through trade over considerable distances.

The prosperity of Nakum during this turbulent Terminal Classic period, when many other Maya sites were being abandoned, can be attributed to its role as a fluvial port controlling commercial activities in the Southern Maya Lowlands. Its advantageous location on the northern portion of the Holmul River apparently permitted the ruling elite to actively participate in trade in spite of the broad economical and political crisis that profoundly enveloped the Southern Maya Lowlands. This probably accounts for the prosperity of this city which survived the collapse of other major centres such as Tikal or Naranjo by at least a century.

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